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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,213	10/28/2003	Robin Walton	200209560-1	4506

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EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/695,213

Applicant(s)

WALTON ET AL.

Examin r

Jimmy H. Nguyen

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-- The MAILING DATE of this c mmunication appears n th cover sheet with th correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is made in response to applicant's RESPONSE TO ELECTION REQUIREMENT AND AMENDMENT, filed on 05/16/2006.
2. Applicant's election without traverse of Group I (claims 1-12 and 17-20) in the reply filed on 05/16/2006 is acknowledged.
3. Claims 13-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 05/16/2006.

Claim Objections

4. Claims 2 and 6 are objected to under 37 CFR 1.75(a) because although these claims meet the requirement 112/2d, i.e., the metes and bounds are determinable, however the following changes should be made:

As to claim 2, "to detect movement of a surface upon which the housing is placed relative to the bottom surface of the housing" should be changed to -- to detect movement of the bottom surface relative to a surface upon which the housing is placed, --, so as to be consistent with the disclosure (see page 3, lines 19-20).

As to claim 6, -- and-- should be inserted immediately before "adjacent" in line 4 because a right-click actuator, rather than the housing, is adjacent to the trackball.

It is in the best interest of the patent community that applicant, in his/her normal review and/or rewriting of the claims, to take into consideration these editorial situations and make changes as necessary.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 18, it is not clear what the applicant means “means, oriented for actuation by a thumb of a user, for providing left-click functionality”, i.e., **which** is oriented for actuation by a thumb of a user.

As per claim 19, it is not clear what the applicant means “means, oriented for actuation by an index finger of a user, for providing right-click functionality”, i.e., **which** is oriented for actuation by an index finger of a user.

As per claim 20, it is not clear what the applicant means “means, oriented for actuation by a middle finger of a user, for providing scroll functionality”, i.e., **which** is oriented for actuation by a middle finger of a user.

7. It is noted applicants that due to the above 112 rejection to claims 18-20, the following art rejections to these claims are based as best understood by the examiner.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

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patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-7, 12, and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Danzyger et al. (US 7,038,664 B2) hereinafter Danzyger.

As to claims 1-4, 12, 17 and 20, the claimed invention reads on the Danzyger reference as follows: Danzyger discloses an input device (10) (see Fig. 3) comprising a housing (see Fig. 3); a position-determining system (a system including a roller ball 12, see Fig. 2, col. 2, lines 52-54) mounted to the housing, the position-determining system being operative to detect and to determine movement of the bottom surface of the housing, relative to a surface upon which the housing is placed movement of the housing, and to provide a first output corresponding to the movement of the housing; and a trackball (20) (see Fig. 3, col. 3, lines 45-51) protruding from the top surface of the housing, the trackball being operative to rotate and to provide a second output corresponding to rotation of the trackball and to provide scroll functionality. Accordingly, all the limitations of these claims are read in the Danzyger reference.

As to claims 5-7, 18 and 19, Danzyger's housing is sized and shaped to be grasped by a hand of a user (see Fig. 3) and Danzyger's input device (10) additionally comprises left-click and right-click actuators (16) (see Fig. 3) mounted to the housing such that, when the housing is grasped by the user with the top surface of the housing substantially centered in the palm of the hand, the index finger of the user can be placed in aligning with the trackball for providing scroll functionality (see col. 3, lines 45-51) and the right-click actuator for providing a right-click functionality (see col. 2, line 62 through col. 3, line 3) and the thumb of the user can be placed in aligning with the left-click actuator for providing left-click functionality (see col. 2, line 62

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through col. 3, line 3). Accordingly, all the limitations of these claims are read in the Danzyger reference.

10. Claims 1-5, 12, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Meriaz (US 2002/0113776 A1).

As to claims above, the claimed invention reads on the Meriaz reference as follows: Meriaz discloses an input device (10) (see Fig. 1) comprising a housing (12) (see Fig. 1); a position-determining system (a system including a roller ball 22, see Fig. 2) mounted to the housing, the position-determining system being operative to detect and to determine movement of the bottom surface of the housing, relative to a surface upon which the housing is placed movement of the housing and to provide a first output corresponding to the movement of the housing (see paragraph 0013); and a trackball (16) (see Fig. 1) protruding from the top surface of the housing, the trackball being operative to rotate and to provide a second output corresponding to rotation of the trackball (see paragraph 0012). Meriaz's input device further comprises a left click actuator (20) (see Fig. 1) mounted to the housing such that, when the housing is grasped by the user with the top surface of the housing substantially centered in the palm of the hand, the index finger of the user can be placed in aligning with the trackball (see paragraph 0015, lines 3-4) and the thumb of the user can be placed in aligning with the left-click actuator for providing left-click functionality (see Fig. 1). Accordingly, all the limitations of these claims are read in the Meriaz reference.

11. Claims 1-4, 12, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang (US 5,298,919).

As to claims above, the claimed invention reads on the Chang reference as follows:

Chang discloses an input device (10) (see Fig. 1) comprising a housing (12) (see Fig. 1); a position-determining system (a first locating member 16 including a roller ball 22, see Fig. 2) mounted to the bottom surface of the housing, the position-determining system being operative to detect and to determine movement of the bottom surface of the housing, relative to a surface upon which the housing is placed movement of the housing and to provide a first output corresponding to the movement of the housing (see col. 4, lines 39-42); and a trackball (a third locating member 20, see Fig. 1) protruding from the top surface of the housing, the trackball being operative to rotate and to provide a second output corresponding to rotation of the trackball (see col. 4, lines 44-46). Accordingly, all the limitations of these claims are read in the Chang reference.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 6-9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meriaz, and further in view of Suzuki (US 6,307,539 B2).

As per claims 6-8 and 19, as discussed in the rejection above, Meriaz discloses a number of limitations of these claims including a limitation, "when the housing is grasped by the user with the top surface of the housing substantially centered in the palm of the hand, the index finger of the user can be placed in aligning with the trackball". Further, Meriaz teaches the input

device comprising a second switch (20) (or a right-click actuator) provided to another (right) side of the housing (see paragraph 0016, last 3 lines). Accordingly, Meriaz discloses all the claimed limitations except that Meriaz does not expressly disclose a particular location of the right-click actuator and an aperture of the actuator, as presently claimed.

However, Suzuki discloses a related input device (see Fig. 1) comprising a trackball (1) and a switch (5) mounted to the housing, being adjacent to the trackball, and having an aperture (see Fig. 1, col. 5, lines 13-21). Suzuki also teaches a portion of the trackball (1) protruding from the housing and through the aperture (see Fig. 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to relocate the right-click actuator of Meriaz surrounding the trackball, in view of the teaching in the Suzuki reference, because this would allow the user to easily touch the actuator by using the same finger, which is used to rotate the trackball, as taught by Suzuki (see col. 5, lines 19-21). As a result of the combination of Meriaz and Suzuki, the input device of Meriaz in view of Suzuki obviously includes the claimed feature, “a right-click actuator mounted to the housing and adjacent to the trackball such that, when the housing is grasped by the user with the top surface of the housing substantially centered in the palm of the hand, the index finger of the user is aligned with the trackball and the right-click actuator”.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Meriaz and Suzuki to obtain the invention of these claims.

As to claim 9, since Meriaz teaches the trackball rotated by a user's index finger (paragraph 0015, lines 3-4) and Suzuki teaches the actuator surrounding the trackball, at least a substantial portion of the right-click actuator is located left of the centerline of the housing.

14. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meriaz, and further in view of Adams et al. (US 6,031,518) hereinafter Adams.

As to claim 20, as discussed in the rejection to claim 17 above, Meriaz discloses all the claimed limitations of this claim except that Meriaz does not disclose the claimed feature, “means, oriented for actuation by a middle finger of a user, for providing scroll functionality”. However, Adams discloses a related input device comprising a scrolling wheel (34) operated by using a middle finger of a user, for providing scroll functionality (see Fig. 6, col. 3, lines 31-51). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide a scrolling wheel in the input device of Meriaz, at the location where as the scrolling wheel can be operated by a middle finger of a user, in view of the teaching in the Adams reference, because this would provide a user ergonomically and comfortably to scroll the document or window in an up and down direction (i.e., Z-direction), as taught by Adams (see Abstract).

15. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meriaz in view of Suzuki as applied to claim 6 above, and further in view of Adams.

As to claim 10, as discussed in the rejection to claim 6 above, Meriaz in view of Suzuki discloses all the claimed limitations of this claim except that Meriaz does not disclose a scroll wheel in the manner presently claimed.

However, Adams discloses a related input device comprising a scrolling wheel (34) mounted to the housing such that when the housing is grasped by the user with the top surface substantially centered in the palm of the hand, the middle finger of a user is aligned with the scroll wheel (see Fig. 6, col. 3, lines 31-51). It would have been obvious to a person of ordinary

skill in the art at the time of the invention was made to provide a scrolling wheel in the input device of Meriaz, at the location where as the scrolling wheel can be operated by a middle finger of a user, in view of the teaching in the Adams reference, because this would provide a user ergonomically and comfortably to scroll the document or window in an up and down direction (i.e., Z-direction), as taught by Adams (see Abstract).

As to claim 11, the input device of Meriaz in view of Suzuki and Adams includes at least a substantial portion of the right-click actuator located left of the scroll wheel.

16. Claims 5, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang and further in view of Adams.

As to these claims, as discussed in the rejection above, Chang further discloses the housing sized and shaped to fit in a user's hand (col. 2, lines 43-44) and the input device comprising a left-click actuator (a button 42, see Fig. 1) and a thumb wheel (26) actuated by a user's thumb (see Fig. 1, col. 5, lines 65-68). As shown in Fig. 1, Chang's input device can be grasped by the right hand of the user with the top surface of the housing substantially centered in the palm of the hand and the index finger of the user can be placed in aligning with the trackball. Accordingly, Chang discloses all the claimed limitations of these claims except that Chang does not expressly disclose particular locations of the left-click actuator and the scroll wheel such that the thumb of the user is aligned with the left-click actuator when the user grasps the input device, as presently recited in claims 5 and 18, and the wheel is actuated by the user's middle finger, as presently recited in claim 20.

However, Adams discloses a related input device comprising a left-click actuator (a key 28, see Fig. 6) mounted to the left side of the housing and the scroll wheel (34) mounted to the

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top surface of the housing such that, when the housing is grasped by the user with the top surface substantially centered in the palm of the hand, the index finger of the user is aligned with the trackball (32), the thumb of the user is aligned with the left-click actuator (28), and the user's middle finger is actuated the scroll wheel (34) (see Fig. 6). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to relocate the left-click actuator of Chang, in view of the teaching in the Adams reference, because this would this would allow the user ergonomically and comfortably to operate the trackball, the left-click actuator, and the scroll wheel, as taught by Adams (see Abstract and Fig. 6).

17. Claims 6-9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, and further in view of Suzuki.

As per claims 6-8 and 19, as discussed in the rejection above, Chang discloses a number of limitations of these claims including a limitation, "when the housing is grasped by the user with the top surface of the housing substantially centered in the palm of the hand, the index finger of the user can be placed in aligning with the trackball" (see the rejection to claims 5 and 18 above). Further, Chang teaches the input device comprising a right-click actuator (42) (see Fig. 1) mounted to the housing adjacent to the trackball (20) (see Fig. 1). Accordingly, Chang discloses all the claimed limitations except that Chang does not expressly disclose a particular location of the right-click actuator and an aperture of the actuator, as presently claimed.

However, Suzuki discloses a related input device (see Fig. 1) comprising a trackball (1) and a switch (5) mounted to the housing, being adjacent to the trackball, and having an aperture (see Fig. 1, col. 5, lines 13-21). Suzuki also teaches a portion of the trackball (1) protruding from the housing and through the aperture (see Fig. 1). It would have been obvious to a person of

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ordinary skill in the art at the time of the invention was made to relocate the right-click actuator of Chang surrounding the trackball, in view of the teaching in the Suzuki reference, because this would allow the user to easily touch the actuator by using the same finger, which is used to rotate the trackball, as taught by Suzuki (see col. 5, lines 19-21). As a result of the combination of Chang and Suzuki, the input device of Chang in view of Suzuki obviously includes the claimed feature, “a right-click actuator mounted to the housing and adjacent to the trackball such that, when the housing is grasped by the user with the top surface of the housing substantially centered in the palm of the hand, the index finger of the user is aligned with the trackball and the right-click actuator”. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Chang and Suzuki to obtain the invention of these claims.

As to claim 9, since Suzuki teaches the actuator surrounding the trackball, Chang in view of Suzuki obviously includes the feature, “at least a substantial portion of the right-click actuator is located left of the centerline of the housing”.

18. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Suzuki as applied to claim 6 above, and further in view of Adams.

As to claim 10, Chang further discloses the input device comprising a scroll wheel (26) actuated by a user's thumb (see Fig. 1, col. 5, lines 65-68). Accordingly, Chang in view of Suzuki discloses all the claimed limitations of this claim except that Chang does not disclose a particular location of the scroll wheel such that the scroll wheel is actuated by a middle finger of the user, as presently claimed.

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However, Adams discloses a related input device comprising a scrolling wheel (34) mounted to the housing such that when the housing is grasped by the user with the top surface substantially centered in the palm of the hand, the middle finger of a user is aligned with the scroll wheel (see Fig. 6, col. 3, lines 31-51). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to relocate the scroll wheel of Chang, in view of the teaching in the Adams reference, because this would allow the user ergonomically and comfortably to operate the trackball and the scroll wheel, as taught by Adams (see Abstract and Fig. 6).

As to claim 11, the input device of Chang in view of Suzuki and Adams includes at least a substantial portion of the right-click actuator located left of the scroll wheel.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHN
June 7, 2006



Jimmy H. Nguyen
Primary Examiner
Technology Division: 2629